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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/371,760	08/10/1999	TOMOYUKI FUNAKI	25484.00750	9629

7590 02/05/2002

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EXAMINER

NOLAN, DANIEL A

ART UNIT PAPER NUMBER

2654

DATE MAILED: 02/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/371,760

Applicant(s)

FUNAKI, TOMOYUKI

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,13 and 15-21 is/are allowed.
- 6) ☒ Claim(s) 1,4-11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 14.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 January 2002 has been entered.

Response to Amendment

3. The amendment filed 17 January 2002 was entered to the following effect:
 - Claims 1, 6, 11 and 14 were changed as indicated.

Response to Arguments

4. Applicant's arguments filed 17 January 2002 have been fully considered but they are not persuasive.

- The allegation that the Examiner would indicate allowability during a telephone interview would not be the case because the proposed change would not be in hand and because there would not be sufficient time. The interview summary made at the time and attached to this action is contrary to the applicant's assertion.
- The amendments make no change of substance to the claims at issue that would alter the grounds for rejection made in prior actions.
- In response to the applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what motivates the disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. *In re Bozec*, 163 USPQ 545 (CCPA) 1969. In this case, it would have been obvious for a person

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having ordinary skill in the pertinent art, at the time the invention was made, to use the method of setting threshold parameters with a reasonable expectation of producing a result in the Kohler method/system because Kohler teaches one of ordinary skill in the art the benefit of using his invention to use established preset thresholds.

- As with anticipation, applying obvious prior art to a patent claim requires a finding that the claim at issue "reads on" a prior art reference. See *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 781, 227 USPQ 773, 778 (Fed. Cir. 1985). In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is obvious or anticipated, regardless of whether it also covers subject matter not in the prior art. See *id.* at 781.

5. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

- Regarding claim 1 and in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *manner for setting the parameters*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the

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specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

- Regarding claim 6 and associated features, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to correlate notes with respect to some predetermined scale because to do otherwise would be to produce random sounds having no significance, which the prior art of reference does not do. As disclosed in column 24, the device has the flexibility to provide the claimed scale designation in question, in that it may be arranged to identify tones in other sequences.
- In further response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

Kohler

6. Claims 1-5, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (U.S. Patent 6,140,568).

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7. Regarding claims 1, 11 and 14, Kohler claims in his claim 1 the specific features of *receiving signals, extracting characteristics* (decomposing) *and setting parameters*.

With regard to the feature of *matching volume levels*, Kohler employs a MIDI converter to process *volume* (column 3 line 62) and further uses that MIDI to set *thresholds* (column 5 lines 10-12). While Kohler does not specifically mention setting a *volume threshold* because he qualifies the above referenced disclosure as examples (bottom of column 4), it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to put the volume threshold detection mechanism at that point to start, continue and stop processing as shown by Kohler in figures 9 & 10.

Regarding the extraction of character with use of filtering, Kohler describes filtering out non-pitched content (column 3 lines 52-55). While not specifying upper and lower pitch limits, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to establish limits beyond which and less than which a signal would be considered.

8. Regarding claim 4, the claim is set forth with the same limitations as claim 1. Kohler represents a *display* in figure 2 for presenting information to the user/operator (column 10 line 41).

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9. Regarding claim 5, the claim is set forth with the same limitations as claim 4.

Kohler claims direct control of the parameters (3rd feature of claim 30) enabled by the keyboard (column 10 line 26).

Kohler & Humphrey⁷⁵ et al

10. Claims 6-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler in view of Humphrey⁷⁵ et al (U.S. Patent 3,894,186).

11. Regarding claim 6, Kohler discloses the features of *Input* (addressed in response to claim 1) and *pitch extracting* (*ibid.* responding to claim 3).

Kohler further discloses the means to *determine notes* (column 3 line 47) using *pitch* with the recognizer (item 400, figure 1) in response to prior attempts (last paragraph of column 1 through column 2 line 35) more successfully (in figure 16 items 421284-421286).

Kohler does not disclose a *scale designation section* to correlate the above note determination with the values of a scale. Humphrey⁷⁵ et al explicitly assigns notes by activation of a visual device in reaction to pitch values (last paragraph of column 9). Because Kohler, Humphrey⁷⁵ et al and the immediate invention strive to present audio signals in visual form, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to employ a well known coding scheme such as musical notation and its attendant scale rather than to attempt to train operators in technical representation.

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12. Regarding claim 7, the claim is set forth with the same features as claim 6. While Kohler does not deal with presentation using a scale and so would not be expected to address the use of different scales, Humphrey⁷⁵ et al teaches the characteristics of the scales (in column 4 lines 42-45) as being either *diatonic* or *chromatic* of 7- or 12-tones, respectively.

13. Regarding claim 8, the claim is set forth with the same features as claim 7. While Kohler does not deal with presentation using a chromatic scale and so would not address the matter of assigning *diatonic* or *intermediate* notes. Humphrey⁷⁵ et al recognizes the possibility of implementing either scale (starting at the 6th line from the end of column 20 and in the 1st paragraph of column 24).

14. Regarding claim 9, the claim is set forth with the same features as claim 8. While Kohler does not deal with presentation on a musical scale and so would not address the matter of assigning *diatonic* or *intermediate* notes. Humphrey⁷⁵ et al recognizes that different representations could be used, changing the number of output or display elements (column 24 2nd paragraph). Further, it would have been obvious to a person of ordinary skill in signal processing at the time of the invention that dealing with a signal with finite limits increasing the number of elements will narrow the intervals between them, or pitch extremes, and reducing the number of division will broaden the pitch limits.

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15. Regarding claim 10, the claim is set forth with the same features as claim 6.

Kohler teaches that *note length* and specific *minimums* (column 21 lines 29-32) validate a note. This *minimum note length* corresponds to the *unit* of the claim as being the lowest amount that is considered. It would have been obvious to a person of ordinary skill in signal processing at the time of the invention that the predominant basis for established equivalence scales and measures is the smallest recognizable part.

Allowable Subject Matter

16. Claims 12, 13, and 15-21 are allowed.

17. The following is a statement of reasons for the indication of allowable subject matter:

- Regarding claims 11, 2, 15, 17, 19 and 20; the features of *input*, *pitch extracting* and the means to *determine notes* using *pitch* are the same as those for claim 6 and 3, the ability to use different scales to represent processing is neither anticipated nor has it been found in an obvious combination in the prior art of record.
- Claims 13, 16, 18 and 21 depend on claims which have been found to be allowable and so do they become allowable as a result.

18. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Nolan whose telephone number is (703) 305-1368. The examiner can normally be reached on Monday, Tuesday, Thursday & Friday, between the hours of 6:30 AM and 5:00 PM.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached at (703) 305-4379.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE".

Formal response to this action may be faxed according to the above instructions,

or mailed to: Box AF
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or hand-delivered to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

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Informal fax communications may be sent to the Examiner at (703) 746-5823.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist at phone (703) 305-4700.

Daniel A. Nolan
Examiner
Art Unit 2641

dan

February 1, 2002



Richmond Dorvil
Primary Examiner